the stroma, by extension these groups become irregularly and rather widely confluent; the asci are single and separated by the stroma hyphae, but are eventually formed in large numbers and then appear in two or three indefinite layers, more or less contiguous, or separated by "septate paraphyses" which represent the remains of the stroma hyphae. Single asci are first globose, becoming wide ellipsoid, sessile, aparaphysate, 8-spored, up to 45 × 28μ, the wall thickened around the apex to 5–6μ; at maturity each elongates to reach the surface of the stroma, discharges its spores and collapses to make room for others. Spores conglobate or multi-seriate in the ascus, hyaline, slipper-shaped with rounded ends, 20–26 × 7–8μ, transversely 3- and longitudinally 1-septate, slightly constricted at the middle septum and the upper half often slightly wider than the lower, smooth, strongly refractive.

The above two species of *Elsinoe* are the first of this genus to be recorded on indigenous host-plants in Australia; the genus is becoming better known and its distribution on native flora now includes most parts of the tropics. Both of these Australian species have typical *Sphaceloma* conidial stages.

(65) Maireella tasmanicum (Mass.) Hansf., n. comb.

= *Dimerosporium tasmanicum* Mass., *Kew Bull.* 1898: 129; *Sacc. Syll. Fung.*, 16:410, 1902.

This fungus forms small black to greyish raised spots on one or both sides of the phyllodes, up to 1 mm. diam., at first covered by the epidermis and consisting of a subcuticular plate of subhyaline cells in 2–3 layers, up to 30μ thick in places, thinner towards the edge. The cells are elongated perpendicularly to the leaf surface, and measure 5–15 × 3–6μ, at first hyaline, then turning dark brown in spots, finally becoming almost entirely brown to black. There is no further penetration of the host, and no haustoria are formed in the epidermal cells. At several points this subcuticular plate bursts through the cuticle and forms an ectostroma covering the whole area above the plate, black, up to 350μ high, somewhat rough and containing ascigerous loculi; later other perithecioid loculi are formed around the edge of the ectostroma, free from each other and from the remains of the original locules. These secondary loculi have smooth walls, with an indistinct apical opening, and are irregularly depressed-globose, up to 300μ diam.; the wall consists of several outer layers of dark brown, rounded-polygonal cells, the outermost 10–15μ diam. and about 8μ deep, the inner cells smaller and with thinner walls, gradually passing inwards into hyaline tissue, which in early stages may more or less completely fill the interior. The hymenium of asci and paraphyses covers the basal two-thirds of the mature loculus, and consists of numerous asci directed towards the apical opening, mixed with very numerous, flexuous, filiform, continuous, hyaline paraphyses about 1μ thick, rather gelatinous and intertwined to form a soft tissue, apparently unbranched. The paraphyses appear to arise from the whole inner surface of the loculus. Asci obclavate to cylindric, rounded at the apex, shortly nodose-stipitate, 8-spored, up to 80 × 20μ, the wall around the apex is in immature asci thickened up to 3μ, but no sign of an interior canal or pore was observed, nor any trace of a double wall. Spores irregularly 2-seriate in the ascus, clavate, light brown, smooth, 1-septate and slightly constricted, 18–21 × 8–9μ, the upper cell somewhat larger than the lower, both ends rounded.

The cavity of each loculus is lysigenous in origin, and the stromatic wall in mature loculi is about 25μ thick in the upper part. The original or primary loculi are irregularly dehiscent, and rapidly break up and fall away, so that the fully mature ascostroma consists of a ring of perithecioid loculi surrounding their remains.

On phyllodes of *Phyllocladus rhomboidalis*, St. Crispin's Well, Tasmania, Rodway 367 in Herb. Univ. of Tasmania; sent to me through the courtesy of Prof. Barber.

(66) Meliolina novae-zealandiae Hansf., n. sp.

Plagulae hypophyllae, usque ad 10 mm. diam., vel late confluentes, atrae, dense velutinae. Mycelium ex hyphis atrobrunneis, irregulariter ramosis, exhyphopodiatis, repentibus compositum, supra stomata folii stomopodia efformans et mesophyllum

penetrans. Setae myceliales numerosae, erectae, simplices vel irregulariter furcatae, ramulis usque ad 120μ longis, apice obtusae vel leniter attenuatae, usque ad 440μ alt. et 8–11μ cr. Perithecia dispersa, atra, depresso-globosa, usque ad 500μ diam. et 250μ alt., sursum setulosa; setae numerosae, simplices, atrae, obtusae, usque ad 250μ longae; paries perithecii extus verrucosus, parenchymaticus, cellulis rotundato-polygonalibus, leniter prominentibus, atrobrunneis, intus in massam hyalinam mollem transeuntibus. Asci sat numerosi, basales, erecti, ovati vel late clavati, apice rotundati, nodoso-stipitati, circa 150 × 50μ, 8-spori. Paraphyses hyalinae, septatae, 3–5μ cr., evanescentes. Sporae 2–3-seriatae, cylindraceo-ellipsoideae, utrinque obtusae, 3-septatae, leves, 45–55 × 18–21μ.

Hab. in foliis *Metrosiderodis excelsae*, Rangitoto Is., Auckland, New Zealand, Dingley, July 1950, in Herb. Division of Plant Diseases, Auckland, N.Z.

The colonies are hypophyllous, up to 10 mm. or more in diam. or widely confluent, black, densely velvety. External mycelium of dark brown hyphae creeping over the leaf and forming stomopodia over the stomata, from which the internal mycelium enters the leaf and penetrates most of the mesophyll as intercellular, hyaline, septate hyphae which do not form haustoria in the host cells. Mycelial setae numerous, erect, mostly simple and obtuse to somewhat attenuate at the apex, up to 440 × 8–10μ, or some forked irregularly with branches up to 120μ long. Perithecia scattered amongst the mycelial setae, black, depressed-globose, the upper half bearing numerous erect-spreading simple black obtuse setae, up to 250μ long; perithecia up to 500μ diam. and 250μ high, opening by a rounded pore at the vertex; the wall consists of an outer layer of rounded-polygonal cells which are slightly prominent, hence the surface appears slightly verrucose, passing internally into a hyaline mass of soft parenchyma, at first filling the whole interior. Within this soft tissue the fairly numerous asci develop from the base, replacing the original ground tissue, the remains of which form the more or less evanescent septate "paraphyses". Asci widely clavate to ovate, rounded at the apex and when young thickened there to 10μ, nodose-stipitate below, 8-spored, about 150 × 50μ. Spores cylindric to slightly ellipsoid, obtuse at the ends, dark brown, 3-septate, slightly constricted, 45–55 × 18–21μ, the cells approximately equal in length and the middle ones not noticeably swollen; end cells with the subterminal and sub-basal narrow hyaline bands usual in this genus.

(67) Meliolina cladotricha (Lev.) Sydow, *Ann. Mycol.*, Berlin, 12:553, 1914.
= *Meliola cladotricha* Lev. = *Meliola octospora* Cooke. = *Meliolinopsis octospora* (Cooke) Beeli. = *Meliolina octospora* (Cooke) v. Hoehnel. = *Meliolina sydowiana* Stev. (ex descr.). = *Meliola arborescens* (Syd.). *Mcliolina arborescens* (Syd.) Syd. = *Meliolina yatesii* Syd. = *Meliolinopsis yatesii* (Syd.) Beeli. = *Meliolina radians* Syd.

In my previous account of the genus *Meliolina* (*Proc. Linn. Soc. London*, 157:145, 1944–5), I retained the three species *M. cladotricha*, *M. octospora* and *M. arborescens* as distinct. I have recently been able to examine the type specimen of *M. cladotricha* on *Syzygium* sp., Borneo, in Herb. Paris, and am unable to distinguish it from *M. octospora*. Also in recent years I have examined a series of specimens which have indicated that there is no real difference between *M. cladotricha* and *M. arborescens*, as some specimens have proved intermediate between these. I have seen two collections of *M. cladotricha* from Australia: Bailey 506 on *Tristania* sp., Brisbane 1886, in Herb. Kew; and Fraser 191, on *Syzygium paniculatum*, Dorrigo, New South Wales.

(68) Meliolina mollis (B. & Br.) v. Hoehnel, *Sitzb. K. Akad. Wiss. Wien*, 128:557, 1919.
= *Meliola mollis* B. & Br. = *Dimerosporium mollis* (B. & Br.) Sacc.
On *Acmena smithii*, National Park, New South Wales, June 1935, L. Fraser 222.

(69) Balladyna fraseri Hansf., n. sp.

Plagulae amphigenae, usque ad 4 mm. diam., densae, atrae, breviter velutinae. Mycelium radianto-reticulatum, ex hyphis atrobrunneis, 6–7μ cr., cellulis plerumque 15–20μ longis, irregulariter ramosis compositum. Hyphopodia continua, alternata vel unilateralia, irregulariter digitata vel pulvinata, integra vel saepius sinuosa vel